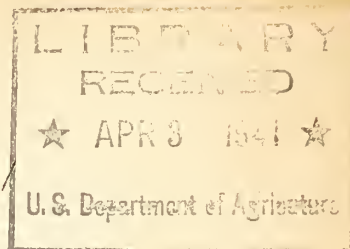


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United States Department of Agriculture  
Bureau of Animal Industry  
Animal Husbandry Division



RECORD-OF-PERFORMANCE PROCEDURE FOR BEEF CATTLE 1/

Introduction

Much progress has been made by beef-cattle breeders in fixing type and conformation. For the very important factor of efficiency of feed utilization, however, much less progress has been made. This is due largely to the lack of adequate methods for measuring this characteristic, although it has been generally recognized that much variation exists in cattle in this respect. In the past few years a considerable amount of research has been done on this subject, and certain methods have been devised that can be used in evaluating differences in efficiency. While such research is yet in its infancy, certain of the methods developed should be helpful to the breeder in producing more efficient cattle.

Purpose

The objective of these recommendations is to aid breeders in developing more efficient strains of beef cattle. The information gathered should aid in the appraisal of the performance of sires, dams, and offspring.

General Principles

1. From birth to weaning all calves in any one herd will be fed alike within reasonable limits as far as possible without extra expense.
2. Females that do not produce enough milk to feed their own calves will be culled.
3. No male calf whose dam does not give sufficient milk for his development will be saved for breeding purposes.
4. Young stock will be handled similarly as to housing and grazing.
5. Young stock will be scored at a standard age or weight. The recommended time of scoring will necessarily differ, dependent upon the environmental conditions under which the animals are raised.

Detailed Recordings and Procedure

1. Individual number for each animal.

1/ Prepared in cooperation with the Minnesota Agricultural Experiment Station. Acknowledgment is made also to the agricultural experiment stations of Indiana, Iowa, and Montana for their valuable assistance.

2. Pedigree.
3. Weight at birth.
4. Weaning weight and age.

(a) Under farm conditions where beef production is intensive calves will be weaned on a weight basis, the weights being as close to 450 pounds for heifers and 500 pounds for bulls or steers as is possible.

(b) Under most range conditions it will be impossible to bring each calf to a standard weight or age before weaning. The optimum age of weaning will vary under different range conditions. It may even become desirable under certain conditions to alter weaning age somewhat from year to year. Changes in age of weaning are not desirable but will not be serious if the calves of any one crop are treated alike. As a general policy it is recommended that range calves be weaned at an average age of 5-1/2 months. In most cases it will be necessary to wean groups of calves when the average age is about 5 1/2 months or whatever age is set as standard for that herd.

#### 5. Standard post-weaning treatment:

(a) In herds being developed under farm conditions the calves should be placed on full feed after weaning. Standard rations should be used; they may vary for different sections of the country. Rations should consist of those feeds common to the area and should contain (1) a cereal grain, (2) a protein supplement, and (3) a good-quality roughage. The cereal grain may consist of corn, wheat, barley, oats, rye, grain sorghums, rice, or any combination of these grains. The protein supplement should be limited to cottonseed meal, linseed meal, soybean meal, peanut meal, or velvet-bean meal. The roughages should consist of any good-quality hay or silage available at the feed lots. In areas where it is known that mineral deficiencies exist, suitable mineral supplements for correcting such deficiencies should be provided. Salt should be available at all times.

The individual feeding of each calf is recommended wherever possible and in order to make comparisons between individuals it is necessary that the calves be fed under as nearly similar conditions as possible. Differences in weight during the feeding trial affect efficiency of feed utilization and for this reason it is recommended that the following weights be used for the test feeding period:

Heifers: 450 to 850 pounds

Males: 500 to 900 pounds

Where individual feeding is used, a record will be made of the feed consumed by each calf.

In many herds it may not be possible to carry out an individual feeding program. This would apply to large farms or ranches where several bulls may be

used each year and a test on each bull is desired. In these cases, the calves by any one sire may be fed as a group for a period of not less than 6 months. The weights of the calves in any one group will naturally be variable but the ages should not vary more than the 45 days. Rate of gain of each animal during the feeding period will give a very useful guide as to relative efficiency of each calf since rate of gain is closely related to efficiency of feed utilization; i.e., the fast-gaining animal is likely to be the efficient animal. Records should be kept of the amount of feed consumed by each lot.

(b) Under range conditions it may be more useful to test heifers under environmental conditions comparable to those prevailing for the remainder of the breeding herd. In this case it is recommended that the heifers be weighed when approximately 12 and 18 months old and scored when 18 months old.

6. Every animal within any one group will be scored at the same end point-- weight or age. Calves that are placed on full feed will be scored at the close of the feed-lot trial. Calves retained for breeding that are reared under range conditions will be scored when about 18 months old; this will be at about the close of the second grazing period.

Any scoring system by which it is possible to record the individual merit of each calf will be satisfactory. A system similar to that described on A. H. Form 522 or a scoring plan based on measurements as presented in U.S.D.A. Circular No. 524 may be used.

7. The following items will be recorded for each calf:

SUMMARY

Animal No. \_\_\_\_\_ Sex \_\_\_\_\_ Birth date \_\_\_\_\_ Birth weight \_\_\_\_\_

Sire \_\_\_\_\_ Dam \_\_\_\_\_

Performance Record

Birth to weaning

After weaning

Date weaned ..... \_\_\_\_\_  
Age at weaning .... \_\_\_\_\_  
Weight at weaning.. \_\_\_\_\_  
Total gain ..... \_\_\_\_\_  
Daily gain ..... \_\_\_\_\_  
Score at weaning... \_\_\_\_\_

Date finished... \_\_\_\_\_  
Age ..... \_\_\_\_\_  
Final weight ... \_\_\_\_\_  
Total gain ..... \_\_\_\_\_  
Daily gain ..... \_\_\_\_\_  
Feed per 100 lbs. gain  
(list each feed) \_\_\_\_\_  
Score at end of  
test ..... \_\_\_\_\_

Performance data

1. The final evaluation of the individual calf will be based on the following performance data:

- (a) Gain during nursing period
- (b) Gain during feeding period
- (c) Feed per 100 lb. gain (if available)
- (d) Score



2. The evaluation of the female as a dam will be based on her calves' performance as outlined above with possibly added emphasis given to the calves' gain during the nursing period.

3. The evaluation of the sire will be based largely upon his calves' performance in -

- (a) Gain during the feeding period after weaning.
- (b) Feed per 100 lb. gain (if available)
- (c) Score

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